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September 10, 2001

Mr. Lake H. Barrett, Acting Director
Office of Civilian Radioactive Waste Management
Department of Energy
Washington, DC 20585

SEP 26 2001

SUBJECT: Yucca Mountain Public Comment

Dear Lake:

It has been a long time since we have seen each other and I welcome the opportunity to comment upon the suitability of Yucca Mountain for disposal of high level waste per your letter of August 28, 2001.

1. Scientific evaluation is adequate for development of a repository.

Regarding transportation to the site, the industry in the US and the world has safely transported thousands of tons of spent fuel and other high level waste for over 40 years without any negative health effects to the public.

The many man-made and natural barriers being designed into the site offer multiple redundant means of preventing significant radiation release from the site. Design limits for radiation release are ultra conservative, many times lower than that which could negatively affect the environment or living things, including people.

2. Yes, the Secretary should recommend to the President that Yucca Mountain activity should continue to provide a repository as soon as possible.

Even if the site exceeds the current EPA and NRC radiation standards, the work should proceed as explained later in this letter.

3. There are no reasons for the President to conclude that Yucca Mountain is not a qualified repository site or to withhold a construction license.

A central repository at Yucca Mountain would consolidate long term storage at one site rather than more than 100 commercial and government sites throughout the nation. Central, long term control facilitates safety and should be more cost effective.

4. As you know, current radiation standards by the EPA and NRC are based upon the linear no threshold hypothesis (LNT) established in the 40's as a conservative regulation instrument. Many scientific studies completed more recently have indicated conclusively that LNT is faulted.

Toxic substances, to my knowledge, all have a threshold below which there is a positive or at least no negative health effect. For example, if you swallow 100 aspirins at one time, they will probably kill you. Conversely, 1 or 2 will likely cure a headache or help prevent a heart attack.

I have a list of 20 pages of scientific studies and papers, all peer reviewed, compiled by the American Nuclear Society Committee on Low Level Health Effects (1994-1999) that supports radiation hormesis, or a threshold, as occurs with other toxic substances.

As explained in a talk by Doctor Myron Polycove entitled, "Biologic and Epidemiologic Foundations of Radiation Hormesis," at the Annual Meeting of Doctors for Disaster Preparedness, July, 2001, a positive effect upon human health occurs at at least 25 rem per year and maybe as high as 50 or 60 rem per year. An audio tape of his presentation is enclosed. Radiation hormesis, in my judgement, is proven and makes scientific sense as with other toxic substances. In other words, it's the dose that counts.

I raise this issue because the LNT hypothesis for regulation is obsolete. Radiation regulations for Yucca Mountain and other nuclear operations are perhaps 1000 times more stringent than necessary and actually adversely affect human health.

5. As you know, the spent fuel currently planned for disposal at Yucca Mountain contains over 90% of the energy in the fuel that could be recovered if the fuel were to be reprocessed and used in the manufacture of fuel for nuclear power plants. Further, the high level waste from the reprocessing process is about 15% by volume of that of the spent fuel. Also, it is dangerous for a few hundred years, not thousands of years as is the spent fuel.

Design of Yucca Mountain should permit the later recovery and reprocessing of the spent fuel to conserve our natural resources, reduce safety concerns for disposal of high level waste, and eventually reduce the cost of nuclear power and high level waste disposal.

You have a tough job to settle the Yucca Mountain issue in the best long term answer for the country. If you should have any questions on the above response, please contact me.

Best Regards,



Paul C. Williams
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